

REMARKS

**I. INTRODUCTION**

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested. Given the discussions made in the Office Action of June 13, 2006 of the subject matter added to independent claim 39, it is not believed that such a change should require further search or consideration. Entry of the present amendment is respectfully requested.

**II. STATUS OF THE CLAIMS**

Claims 39-46 are pending; claims 1-38 were cancelled without prejudice or disclaimer; and claim 39 is amended herein. As support for the change to claim 39 may be found, for example, at column 33, line 11 to column 34, line 16 of the U.S. Patent No. 6,393,328, which was incorporated by reference into the instant specification, it is respectfully submitted that no new matter is added by the change to claim 39.

**III. SUMMARY OF THE OFFICE ACTION**

In the Office Action, the Examiner rejected claims 39-42 and 45-46 under 35 U.S.C. § 102(b) as being anticipated by *Keegan, Jr.* (U.S. Patent No. 3,083,712); claims 39-42 under 35 U.S.C. § 102(b) as being anticipated by *Aleev et al.* (U.S. Patent No. 4,165,750); claims 39-42 under 35 U.S.C. § 102(b) as being anticipated by *Cywinski* (U.S. Patent No. 5,350,415); claim 43 under 35 U.S.C. § 103(a) as being unpatentable over *Keegan*; and claims 39, 43, and 44 under 35 U.S.C. § 103(a) as being unpatentable over *Reiss* (U.S. Patent No. 5,324,317) in view of *Keegan*.

#### IV. ARGUMENTS

Independent claim 39, from which claims 40-46 depend, recites, in part, that “the electrical stimulation is adapted to mimic a sequencing of at least two muscle groups proximate to the body segment and is sufficient to achieve visible and forceful contraction of the at least two muscle groups.”

As described in the specification, for example, at pages 4-5, electrodes 404 promote electrical stimulation of the surrounding musculature of the joint 402 of the respective body segment 400. The electrodes 404 may be placed at predetermined locations to mimic the natural movement pattern of the affected joint 402. According to the claimed invention, it is possible to mimic a natural functioning of the affected joint without the wear and tear commonly associated with physical activity. In part, as has been discussed previously, the stimulation should include the contraction of the muscle, preferably the visible and forceful contraction of the muscle or muscle groups.

Neither *Hoffman* nor *Reiss* discloses or suggests mimicking the sequencing of at least two muscle groups sufficient to cause a visible and forceful contraction of those muscle groups, as recited in claim 39. Similarly, *Cywinski* does not disclose or suggest those claimed features.

*Cywinski* relates to a device for trophic stimulation of muscles. *Cywinski* describes stimulating motor unit action potentials (MUAPs), which are individual groups of muscle cells that contract together. However, *Cywinski* does not disclose or suggest “to mimic a sequencing of at least two muscle groups proximate to the body segment and is sufficient to achieve visible and forceful contraction of the at least two muscle groups,” as recited in claim 39.

In more detail, *Cywinski* actually teaches away from the claimed features, because *Cywinski* describes that it is preferable to avoid contraction of the muscle. *Cywinski* describes

producing varying pulse pattern signals similar in character to those recorded in live experiments as MUAPs. The mean rate of firing in most MUAPs is far below the stimulation rate necessary to achieve fused, visible and forceful contraction of a muscle.

Accordingly, as none of *Hoffman*, *Reiss*, or *Cywinski* discloses or suggests the features recited in claim 39, it is respectfully submitted that claim 39 is distinguishable over each of those three references, either alone or in combination. As such, Applicants respectfully assert that the rejection of claim 39 is improper and should be withdrawn. Likewise, claims 40-46 are believed to be distinguishable over *Hoffman*, *Reiss*, or *Cywinski* for at least their dependence on independent claim 39. Reconsideration and withdrawal of the above-discussed rejections are respectfully requested.

#### V. CONCLUSION

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

William J. CARROLL, et al.

By:

Michael C. Greenbaum  
Reg. No. 28,419

600 New Hampshire Ave., N.W.  
Washington, D.C. 20037  
Telephone: (202) 944-3000  
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